Litile34™ INSTALLATION MANUAL

Seamless Tiled Panel Wall Solution for Large Area Digital Signage Display

(1st Edition 3/25/2009)

All information is subject to change without notice.

Approved by	Checked by	Prepared by
Ming	Hank	Jack

RECORD OF REVISION

Version and Date	Page	Old Description	New Description	Remark
Mar.25 2009	all		Preliminary Release	

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IMPORTANT INFORMATION

EMC conformance

All Litile34 equipment and accessories are designed to the best industry standards for use in the recreational digital signage environment. The design and manufacture of Litile34 equipment and accessories conform to the appropriate ElectroMagnetic Compatibility (EMC) standards, but correct installation is required to ensure that performance is not compromised.

Waste Electrical and Electronic Equipment Directive

The Waste Electrical and Electronic Equipment (WEEE) Directive requires the recycling of waste electrical and electronic equipment. Whilst the WEEE Directive does not apply to some of Litile34's products, we support its policy and ask you to be aware of how to dispose of this product.
The crossed out wheelie bin symbol, illustrated above, and found on our products signifies that this product should not be disposed of in general waste or landfill. Please contact your local dealer, national distributor or Technical Services for information on product disposal.

Restriction of the use of certain Hazardous Substances

This product uses components that comply with the requirements of the Restriction of the use of certain Hazardous Substances (RoHS) Directive 2002/95/ EC.

Warranty

To register your new Litile34 product, please go to:

http://www.signage.litemax.com/

It is important that you complete the owner information to receive full warranty benefits, including notification of software updates if they are required.

SAFETY WARNING

Installation should only be carried out by suitably qualified personnel in accordance with local wiring regulations.

The display must be earthed.

Only suitably qualified personnel to open and work inside the display modules including changing backlight.

Disconnect from mains supply by removing the mains cable before opening the back panels. The appliance connector is used as the disconnect device.

The display front surface should be cleaned with a lint free cloth lightly dampened with Iso Propyl Alcohol. Do not use other solvents to clean.

Steel toe cap safety footwear should be worn when lifting or handling the units. Appropriate lifting equipment should be used. Modules should not be lifted by one person.

The equipment must be installed securely and bolted to the ground to avoid toppling. Each module must be bolted to each of its neighbouring modules and if necessary securely attached to a fixing point above the display to avoid toppling.
A structural engineer should be consulted prior to installation if there is any doubt about the structural integrity of the surface on which the display is to be built.

The modules should be stacked no higher than 4-high without additional structural support. Seek advice from a suitable qualified structural engineer.

This equipment complies with IEC60950-1:2002 Information Technology Equipment. Safety. General Requirements.

Packing List

Before installation, please ensure the following items have been shipped:
- #1 1 x Litile34 module Display
- #2 1 x MDU Controller
- #3 1 x Power Adapter (12V 5A 60W output) for MDU Controller
- #4 1 x CAT7 D-SUB 9P signal cable (6000 mm)
- #5 1 x DVI-D Cable (3000 mm)
- #6 1 x TVone C2-2000 Series Video Scaler Package including
    - 1 x C2-2200 Video Scaler
    - 1 x Power Adapter (12V 3.3A output) for video scaler
    - 1 x Power Cord (1830 mm)
    - 1 x C2-2000 Series Video Processor Operation Manual

If any of these items should be missing or damaged, please contact your distributor or sales representative immediately.

Ordering Information

Model Number Description

SLD3416-SNN-A01
34″ Seamless Sunlight Viewable Tiled Panel Wall Display (Litile34), Video Wall
Controller (MDU + TVone C2-2200 Video Scaler Package)

Optional Accessories

xxxxxxxxxxxxx CAT7 D-SUB 9P signal cable (6000 mm)
810618301010 Power Cable USA Type
810618301090 Power Cable Europe Type
810618301030 Power Cable Japan Type

1.0 Siting the Litile34 modular display

About Litile34™ Seamless Tiled Panel Wall Solution
The Litile34 modules are intended to operate in sheltered indoor environments. They should not be used out of doors or where they could get wet. The modules remain visible in high ambient light conditions; however it is best to avoid siting the display where sunlight could fall directly on the front of the display screen.

Care should be taken to provide adequate ventilation or airconditioning for cooling. This equipment is designed for safe operation at ambient temperatures between 5°C and +25°C. For optimum performance, the ambient temperature should be maintained between 10°C and 20°C.

The rear should not be obstructed. The modules should be a minimum of 1m from any wall. Rear access is required for servicing purposes.
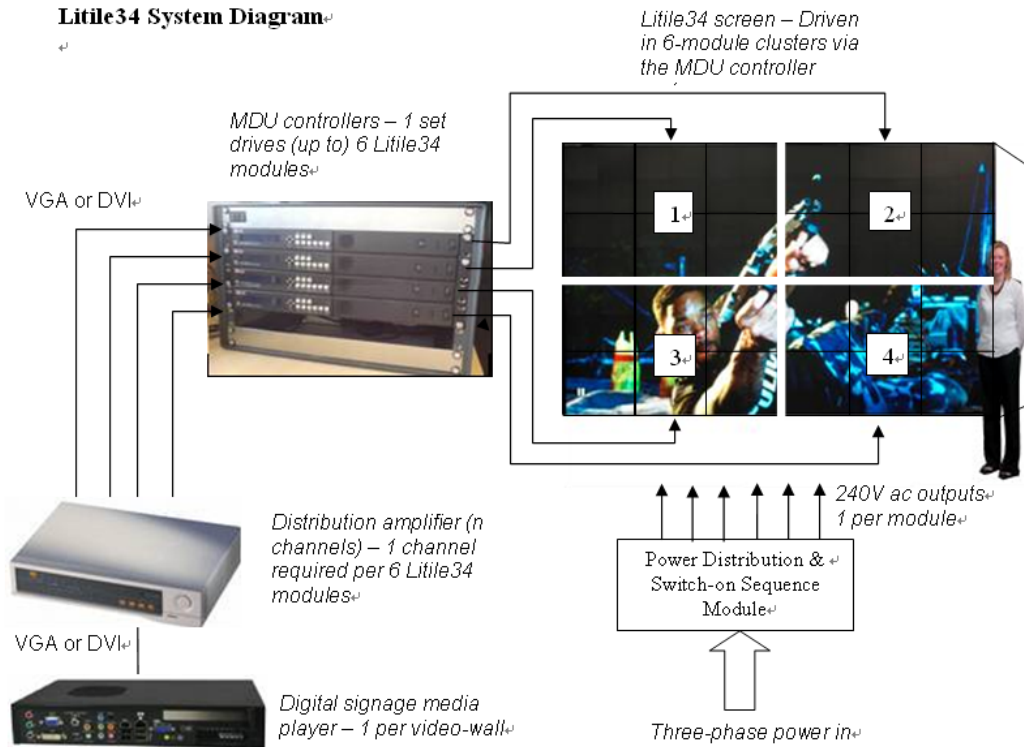
Refer to the Installation Instructions for details of how to move and install the modules.

This handbook contains important information on the installation, operation and maintenance of the Litile34 Sunlight Viewable Seamless Tiled Panel Wall Solution range which is intended for use in the recreational digital signage market and covers all models.
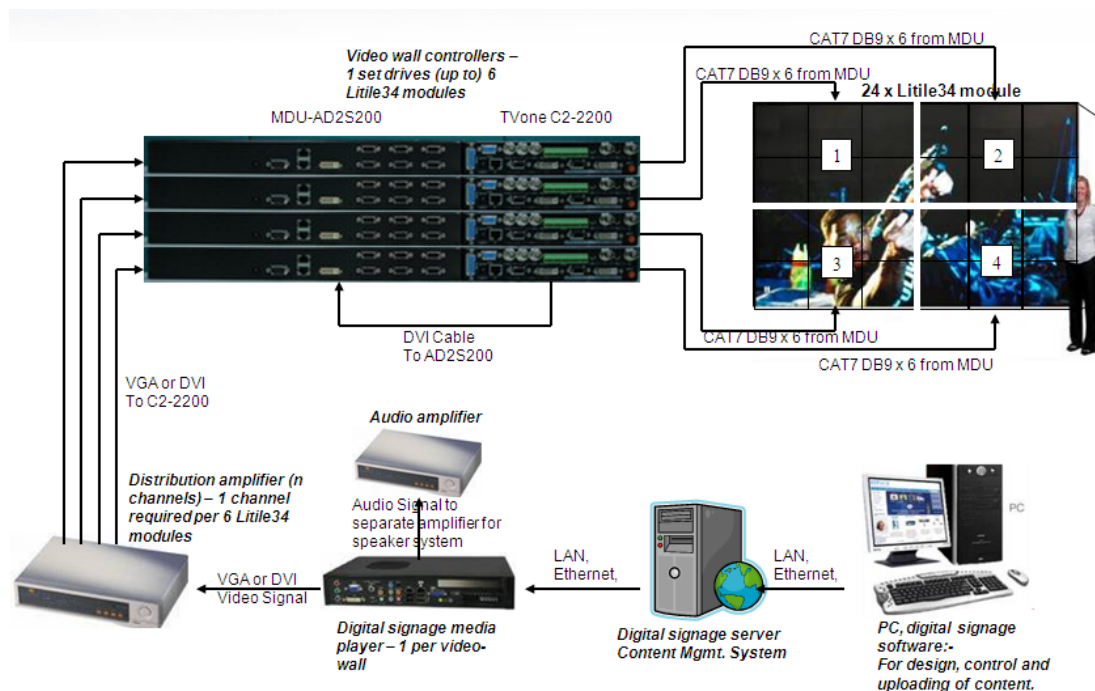
2.0 Litile34 System Diagram

Your Litile34 Sunlight Viewable Seamless Tiled Panel Wall Solution's system diagram shown as below:

Litile34 System Block Diagram

Litile34 System Back View

3.0 Setting up a Suitable Platform

Tools Required
Litile34 module handles x 2
Screwdrivers

Setting up a suitable platform
It is essential to ensure that the modular display is built on a flat and perfectly horizontal rigid surface that can support the weight of the screen as well as offering stability to avoid toppling. The platform should be on a solid floor and bolted to the floor. If it is not possible to bolt the platform to the ground, additional measures must be taken to avoid the possibility of toppling.

An Ideal platform which can be levelled as required is Aluminium staging section which is available worldwide from local suppliers specialising in events and show management. It will be necessary to prepare some metal fixtures to allow the Base Plates to be securely fastened to the platform and levelled, and to secure the platform to the ground. Please contact Litemax if further information is required regarding this preparation.

A base plate is required for each column of modules within the Litile34 modular display. The base plates should be attached to the platform in a secure way and must be level. There are counter-bored holes provided in the base plate through which the base plates can be attached to the platform via a suitable fixing plate. It is important to make sure that nothing obstructs the base plate from sitting flat and flush with the platform surface. It is advisable to use a mechanism to allow adjustment of the baseplates levelling to ensure accurate alignment of the modules.

There are holes in the sides of the base plates to fit a dowell between them, ensuring each base plate is aligned properly with its neighbouring base plate. The base plates should be spaced on a pitch exactly one module width (691.5mm). The front edge of the base plate is on a bearing which allows it to move from left to right. This is to accommodate movement of the modules under thermal expansion.

4.0 Removing Modules from Wooden Cases

The modules weigh 36Kg and should not be lifted by a single individual, or anybody who feels unable to do so. They are designed to be lifted by TWO suitably trained technicians ONLY.

It is very important to handle the modules with care at all times and especially when loading and unloading them from the wooden cases. The edges of the Litile34 module can be damaged if knocked and if damaged, this will impair the seamless performance of the units. In order to remove the modules from the wooden cases, first undo the butterfly catches on either side of the case and carefully lift the lid of the case vertically away from the base using the handles in the case. Be careful not to knock the edges of the Litile34 module during this process.

5a) Side panels
If the module has been provided with cosmetic cover plates, it will then be necessary to remove the top cover plate in order to attach the handles for lifting the module out of the case.

5b) Handles
Two handles are required for lifting the modules. These are provided in the tool kit. They fit into slots on the two sides of the modules and lifting the modules using the handles. The hoop which forms the handle should be pointing forwards when attached to put the handle near the centre of balance of the module for easier lifting.
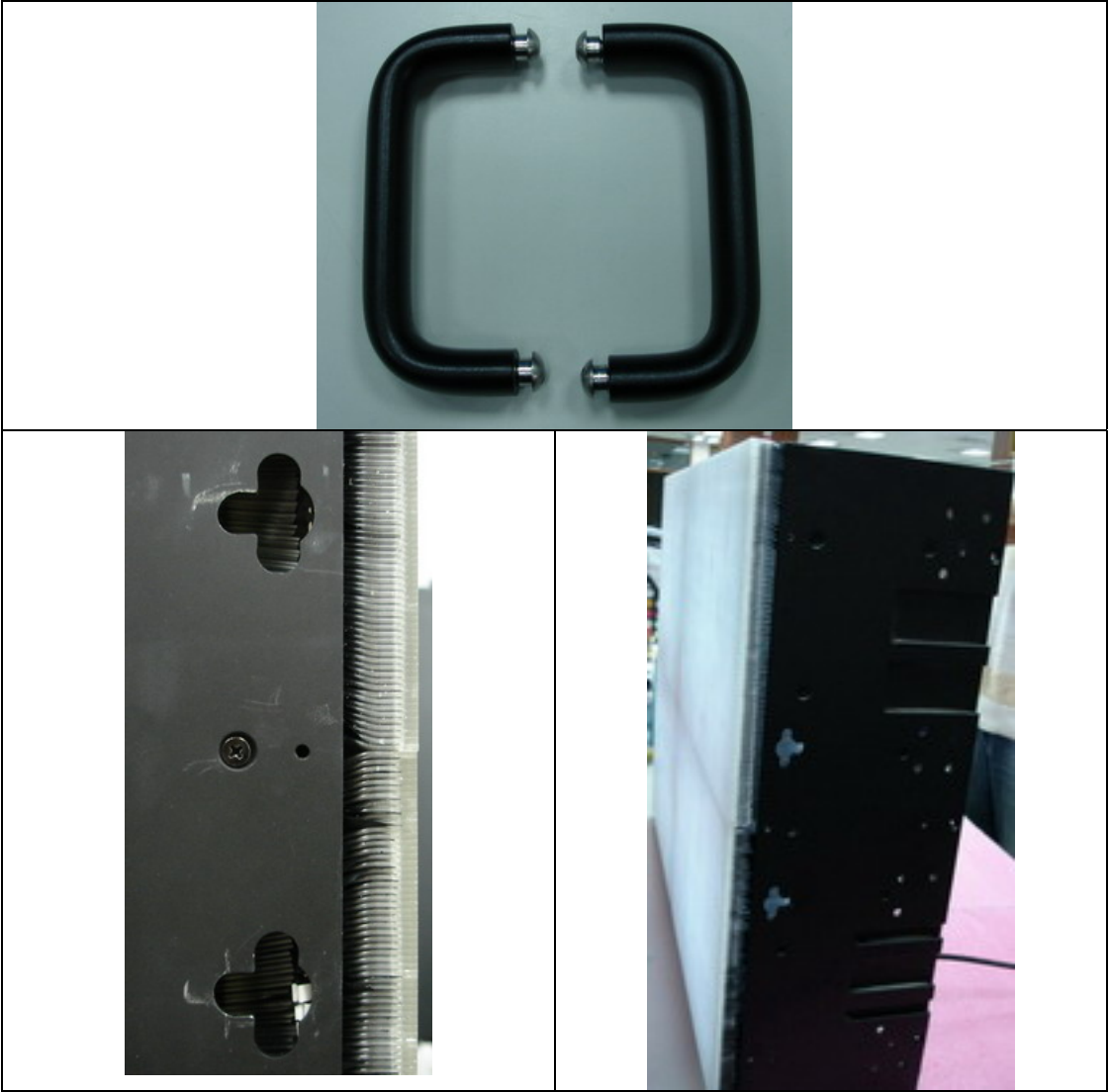
Remove the top cosmetic cover and store carefully for later use. Take two Litile34 module handles (provided as picture above) and insert end piece through the slot provided on the sides of the module and lift the handle up so that the handle points towards the front face of the module.

Ensure the oblong feature is properly engaged into the module and then tighten the black hand-locking nut to secure the handle to the module.

5c) Care of Handling

WARNING: it is possible when lifting the modules for the handles to rotate, so care should be taken to ensure that the handles remain aligned in the 'back-to-front' module direction while lifting. Also, much of the weight of the module is towards the front face, so avoid the module tilting by gently pushing the bottom of the module forwards as it is lifted.

Two technicians should carefully lift the module out of the lower half of the wooden case and lower it carefully onto a clean solid surface ready for installation. The edges of the modules can become damaged if knocked, so special attention is required to ensure the modules are handled with care at all times to maintain the seamless performance of the units.

5.0 Installing First Row of Modules

Before installing the first module, re-check that the base plates and platform are suitably secure and level and that no obstructions are in the way of placing the first row of modules.

6a) Setting the modules

It may be necessary before installation to re-set the 4 grub screws that are used to adjust the height of the modules. These can be accessed through the rear door (opened using the key provided to open the two latches) using a screwdriver. They should be set to a height sufficient so that when all four screws touch the base plate (or the module beneath for row 2 and above), the front face of the module just touches the base plate (or the module) beneath it.

6b) Placing the modules

Start with the centre module within the first row and work outwards along the platform. Carefully load the first module onto its base plate, making sure to engage the slots in the underside of the module with the module alignment dowels on the base plate. Be careful to tilt the module backwards so that the metal rear of the module touches the base plate first.

Then lower the front end into position, making sure to engage the two module alignment dowels on the Base Plate into the two slots provided near the front edge of the underneath of the module. This ensures the front-to-back alignment of the modules.
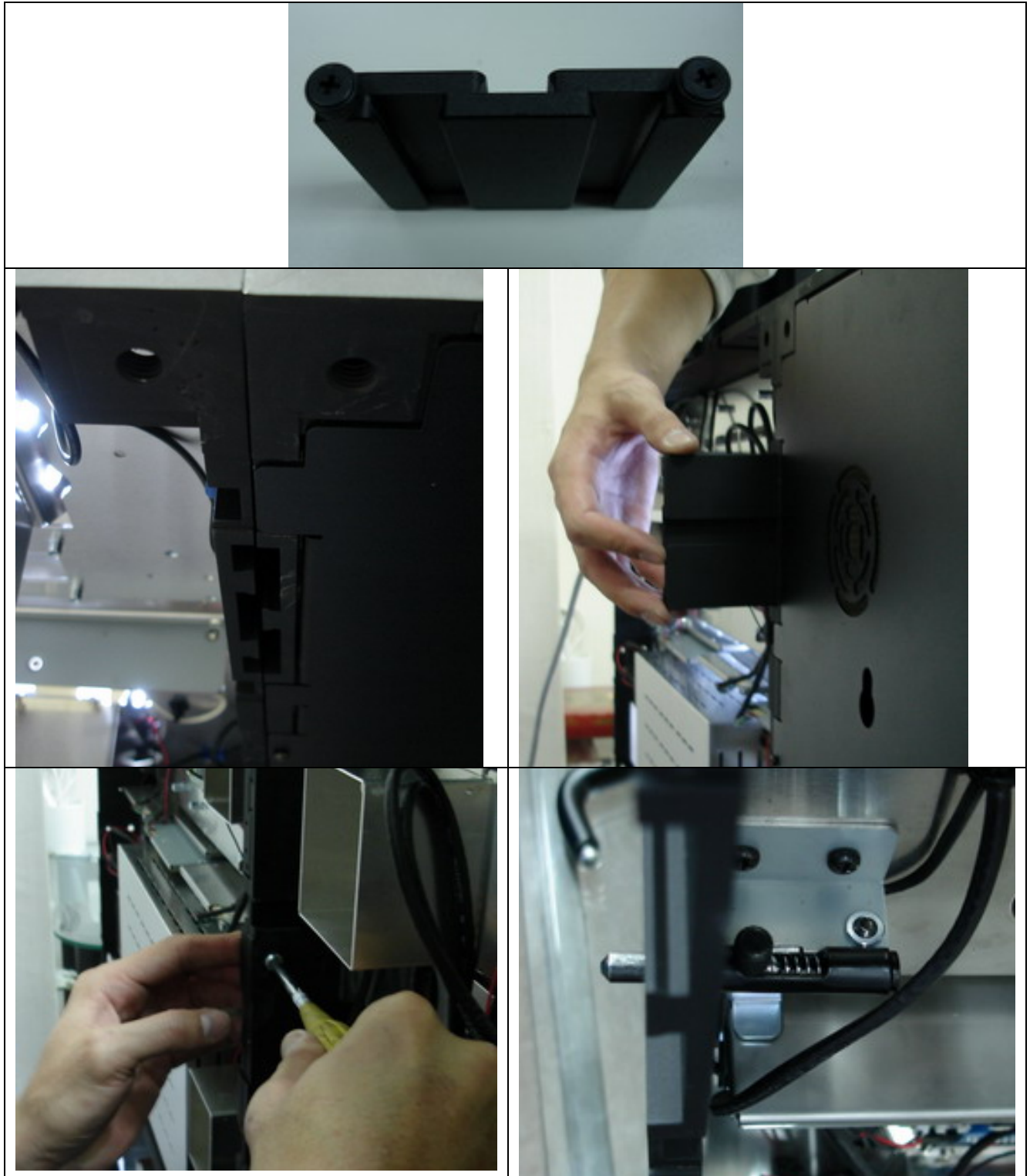Be careful not to damage the Litile34 tiles on the front face of the module by hitting the trim panel on the base plate, or the dowels, or by forcing the module in any direction on top of the base plate or module beneath. When the module has engaged onto the dowels, loosely connect the module to the base plate using two bolts from inside the module (access through the rear door), but do not tighten until the whole row is installed and aligned.

Make sure that the module is sitting centrally along the base plate and if not, move left or right until it is centred. This will ensure that the slots through which the module is bolted to the base plate, line up accurately with the tapped holes in the base plate.

There are similar dowels that should be positioned on the right hand side of the module (when viewed from the front). If they are not present, fit them before loading the module into position. These lock into the slots provided on the left hand side of the next adjacent module. For the right-most module in each row, the dowels are not required and should be removed to avoid interference with the cosmetic side panels that are fitted later. Continue with the next module in the row, working outwards from the centre, making sure the dowels below and to the side of each module are properly engaged in the slots provided. Repeat until the whole row is in position.

6c) Adjusting Module Alignment

When all the modules in the first row are in place, make sure that they are aligned to each other and carefully push the modules together to close up any gaps between the front faces of the modules. Inside each module, there are holes in the left and right hand sides of the modules. Also, there are two grub screws in one side of the module to space them apart. A nut and bolt (provided) should be used to bolt the modules together laterally, and if necessary, the side grub screws can be adjusted using a screwdriver to push or pull the module together/apart as required to close any gaps in the front face.

Similarly, the grub screws in the base can be used to adjust the height of the modules, but make sure not to exceed the available length on the grub screw. These are intended for fine adjustments only.
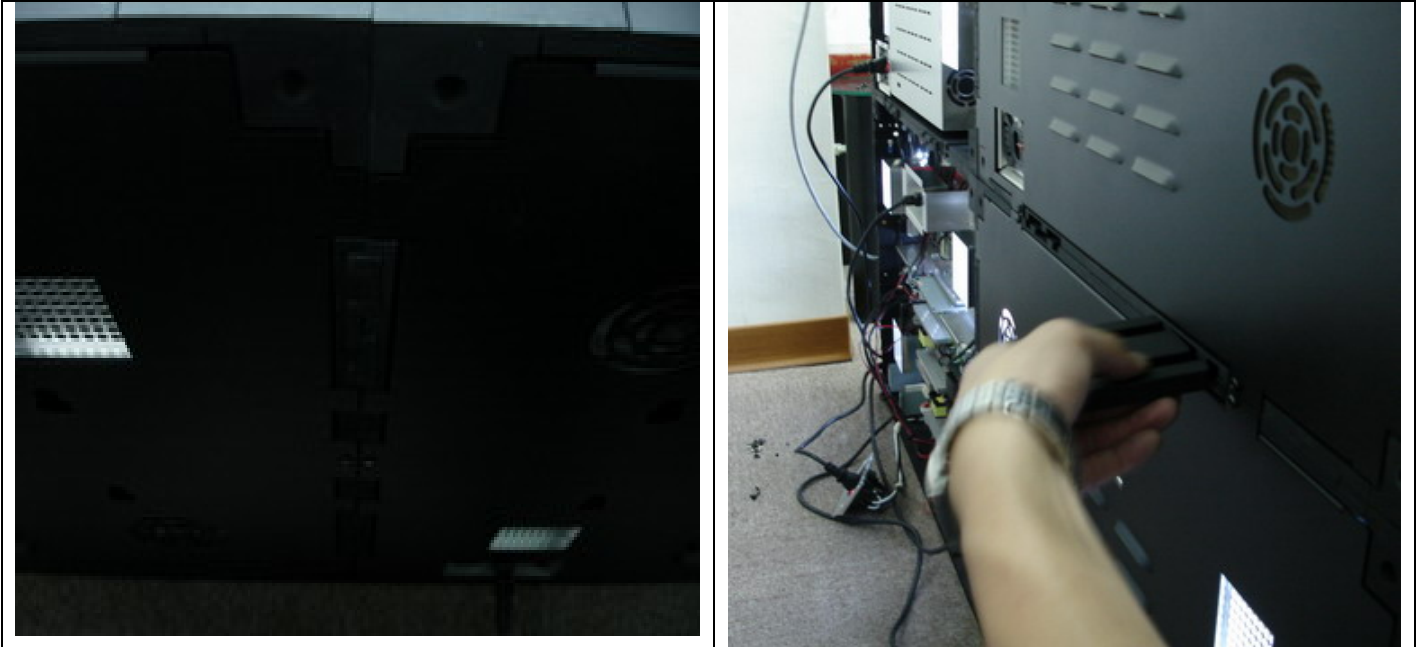
6d) Securing the Modules

When the front face alignment of the modules is acceptable, tighten the screws within the modules to bolt them to the base plates and to each other. When this is complete, the next row can be installed in a similar fashion.

6.0 Installing Additional Rows of Modules

The 2nd, 3rd and 4th rows of modules can be installed in the same fashion as the 1st. There should be two dowels in the top of each of the modules on which the next row of modules will be placed. If they are not in place, install them before the next row of modules is positioned. Care must be taken to make sure that the modules are aligned and positioned carefully with the previous row, as well as within that row.

If the next row of modules requires movement sideways to align with the previous row of modules, it is necessary to start at one end of the display and carefully lift the front edge of the module (to avoid friction between the front faces of the modules) and then gently push into place before lowering into position. Continue this along the row until all the modules are aligned with their neighbors (adjacent and below).

Special care must be taken to ensure technician safety if lifting modules to the upper rows. Appropriate lifting equipment / cranes etc. should be used to ensure safety.

When installing modules, make sure that the bolts for attaching the modules to the row beneath are installed (loosely until the module is aligned) at the earliest opportunity to avoid the risk of modules being dislodged and falling.
Take care when tightening the bolts inside the modules to avoid damaging the lamp electrodes which are near the bolts and/or dislodging the lamp connectors from the lamp terminals.

7.0 Troubleshooting

A general guide to troubleshooting is to consider the system as separate elements, such as:
- Power distribution within the Litile34 modules
- Video Scaler / MDU controller settings
- Cabling (CAT 7 cables from MDU to modules)
- Computer system (display settings, operating system)

No Image
If the fluorescent lamps are not powered on it may still be possible to see a faint image on the display. A complete lack of image is most likely to be caused by incorrect connection, lack of power, failure to provide a signal or incorrect MDU / Scaler settings

Scramble Screen
This occurs when the MDU setting and the output resolution setting on the scaler do not match. Refer to settings table to match the MDU and scaler settings required.

Power Cord
Due to the high power consumption needed for the system, please make sure to use the original power cord as supplied to prevent the overheat issue.

Image Position
If the image does not appear in the correct position on the screen, the settings on the scaler unit will need to be adjusted.

Image Appearance
If a single litile34 shows blank or coloured vertical lines, failed sections, flickering or flashing display, this can indicate a damaged cable or LCD panel. Contact Customer Support at Litemax for assistance.

LiTile34
In case of physical damage to the Litile34 requiring replacement, please contact customer support at Litemax.

8.0 Maintenance and Services

The display should be serviced at least annually. This should include a lamp change and careful cleaning of the inside of the modules. Please contact Litemax Customer Support for further details.

Optical Fiber

Fragile parts, especially in the corner. Always protected by the side panel.

Cleaning

The display should be cleaned with a dampened cloth. Do not use solvents to clean.

Replacing Fan Filters

If the display is used in an environment with high levels of dust, the fan filters may start to become blocked, reducing the efficiency of the fans. They should be replaced on a regular and frequent basis.

Customer Support

If any additional information is required, please contact Litemax Customer Support at the following:-

service@litemax.com

http://www.signage.litemax.com/