

# VEROTEC

Electronics Packaging



**LBX Cases**

## CUSTOM LBX CASES

TecServ+ is the vehicle by which Verotec delivers its value added services. These fall within 5 main categories and are described below. When it comes to LBX Cases, we've worked with many customers in the past to design, manufacture and help bring to market modified and custom versions of our standard products – a small selection of these are pictured below. If you have any special LBX Case requirements, please contact our sales office.



## ENGINEERING SERVICES:

- + Complete review of commercial, electro-mechanical, environmental and regulatory product requirements with customer.
- + Import of STEP, IGES, DWG & DXF file formats
- + Mechanical and electrical design using latest CAD software
- + 3D Modelling to allow conceptual testing before production
- + Component selection from a vast library of parts

## MANUFACTURING SERVICES:

- + Prototype / pre-production samples using small batch shop
- + Modification of standard catalogue products (including machining, CNC punching, laser cutting, painting & silk-screening)
- + Manufacture of custom / bespoke products (including fabrication, machining, CNC punching, plating, painting & silk-screening)
- + Assembly & kitting of components
- + Integration & mechanical / electrical testing of complex systems

## COMPLIANCE SERVICES:

- + Validation of product design and/or specification
- + Advice on environment legislation (RoHS, Reach, Weee etc.)
- + In-house pre-compliance testing for CE marking (Safety, EMC)
- + Supply of product technical construction file
- + Testing & certification of a product at an approved test house (for EMC, shock & vibration, altitude, temperature, humidity etc.)

## LOGISTICAL SERVICES:

- + Express manufacturing service for quick turnaround of urgent orders
- + Special / bespoke packaging for safe transport of goods
- + Scheduled orders (including JIT and KAN BAN systems)
- + Stock holding & distribution
- + Exporting (including export packaging, land/sea/air transportation, freight forwarding, customs documentation & shipping manifests)

## PROJECT MANAGEMENT SERVICES:

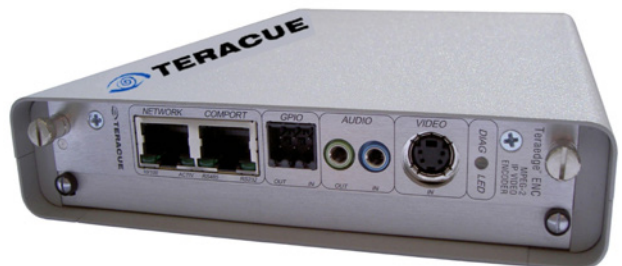
- + Initial project consultation
- + Capability and feasibility study
- + Estimation of project cost and leadtime
- + Management of design process (specification to validation)
- + Management of manufacturing process (prototype to production)
- + Cost reduction programmes throughout product life cycle



**Customised 6U x 24HP x 220mm LBX case with vented top cover - instrumentation application.**



**Customised 3U x 12HP x 220mm LBX case with screwed-in special front panel - instrumentation application.**



**Customised 3U x 6HP x 160mm LBX case with Eurocard installed, filler panel and screened top cover - instrumentation application**

## APPLICATIONS

These attractive and versatile desktop housings offer a unique range of facilities for the horizontal mounting of standard Eurocards and also bespoke electronic PCBs / components. There are 16 sizes available in two widths (3U & 6U), two depths (160mm & 220mm) and four height variations (4HP, 6HP, 12HP & 24HP). Standard IEC-297-3 front panels may be fitted to the LBX case allowing cards and modules from subrack systems to be used in free standing applications. Accessories include DIN connector carriers, chassis plates, card guides and front panels.

## CONSTRUCTION

Four corner mouldings form the basis of the construction. These assemble the top and bottom covers to the two chassis side plates with the aid of eight screws. A unique feature is that the mouldings will allow the LBX front panels to be either captured in a slot or fixed using screws provided. Both the top and bottom covers include 6.3mm spade terminals which provide for earth continuity within the enclosure. All sizes are provided with non-slip self-adhesive feet. The 220mm card compatible versions allow 160mm boards and connector carriers to be assembled, thus giving space for other components. A 3mm recess feature in the bottom cover provides adequate clearance for the solder tails on a eurocard PCB.

## CONNECTOR CARRIERS

For interconnections between cards there is a full range of connector carrier plates designed for mounting DIN 41612 connectors. Supplied singly.

## MATERIAL AND FINISH

Top & bottom covers:

0.9mm Zintec Steel, painted pale grey (BS4800 00A05)

Chassis side plates & connector carriers:

1.6mm aluminium (unfinished)

Front panels:

2.5mm aluminium, anodised

Corner mouldings:

ABS, pale grey (BS4800 00A05)

## EUROCARD MOUNTING PITCH

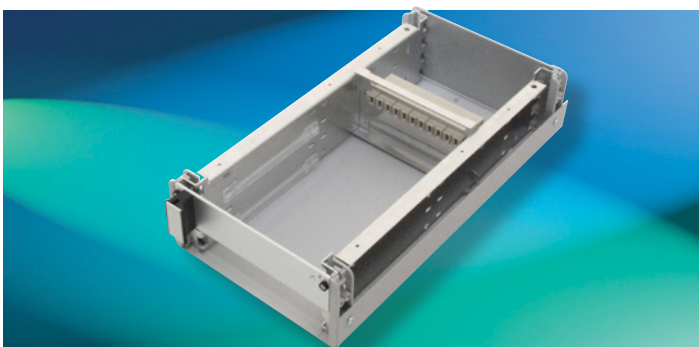
4HP cases are designed to accept a single 4HP (20.32mm) Eurocard whereas 6HP, 12HP & 24HP cases are designed to accept Eurocards on a 3HP (15.24mm) pitch.

## ORDERING INFORMATION

Case Height	Case Width	Card Depth	Actual Depth	A	B	C	D	E	Ordercode
4HP (22.5)	3U (144.1)	160	218.60	202.6	103.0	19.9	128.5	110.9	114-52004
4HP (22.5)	3U (144.1)	220	278.60	262.6	103.0	19.9	128.5	110.9	114-52006
4HP (22.5)	6U (277.5)	160	218.60	202.6	236.4	19.9	261.9	244.3	114-52005
4HP (22.5)	6U (277.5)	220	278.60	262.6	236.4	19.9	261.9	244.3	114-52007
6HP (32.6)	3U (144.1)	160	218.60	202.6	103.0	30.1	128.5	110.9	114-52008
6HP (32.6)	3U (144.1)	220	278.60	262.6	103.0	30.1	128.5	110.9	114-52010
6HP (32.6)	6U (277.5)	160	218.60	202.6	236.4	30.1	261.9	244.3	114-52009
6HP (32.6)	6U (277.5)	220	278.60	262.6	236.4	30.1	261.9	244.3	114-52011
12HP (63.1)	3U (144.1)	160	218.60	202.6	103.0	60.6	128.5	110.9	114-52012
12HP (63.1)	3U (144.1)	220	278.60	262.6	103.0	60.6	128.5	110.9	114-52014
12HP (63.1)	6U (277.5)	160	218.60	202.6	236.4	60.6	261.9	244.3	114-52013
12HP (63.1)	6U (277.5)	220	278.60	262.6	236.4	60.6	261.9	244.3	114-52015
24HP (124.0)	3U (144.1)	160	218.60	202.6	103.0	121.5	128.5	110.9	114-52016
24HP (124.0)	3U (144.1)	220	278.60	262.6	103.0	121.5	128.5	110.9	114-52018
24HP (124.0)	6U (277.5)	160	218.60	202.6	236.4	121.5	261.9	244.3	114-52017
24HP (124.0)	6U (277.5)	220	278.60	262.6	236.4	121.5	261.9	244.3	114-52019

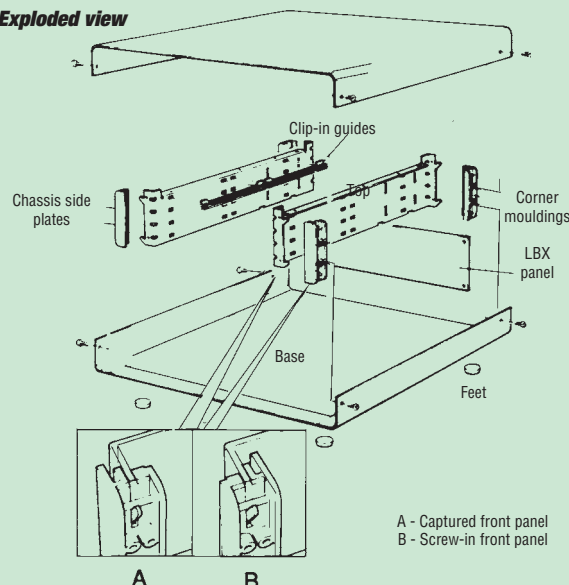


LBX Eurocard cases

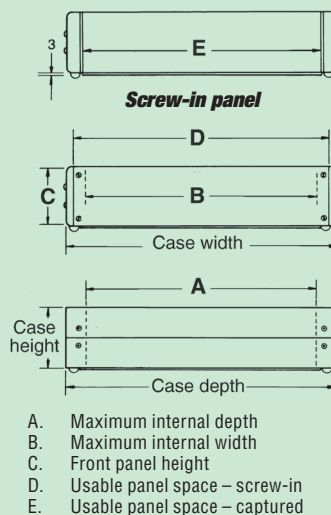


LBX Eurocard case with connector carrier and guides installed

## Exploded view



## Dimensional details – captured panel



## ACCESSORIES

A range of accessories are available for the LBX case including front panels, connector carriers, chassis plates and card guides

### FRONT PANELS

A single LBX front panel is provided with each case and additional LBX panels are available separately in a variety of sizes. The plastic corner mouldings of the LBX case can be assembled in two ways; the first option allows front panels to be "captured" securely in a groove, thus eliminating the need for fixings and producing a clean finish. The second option (achieved by turning the mouldings 180 degrees) allows for Eurocards to be fitted using standard front panel fixings

### CONNECTOR CARRIERS

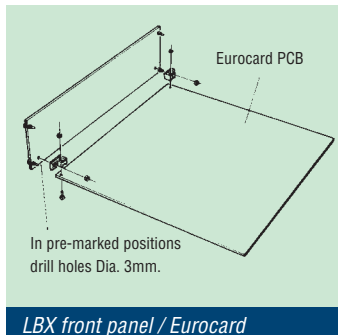
To aid insertion / extraction of eurocards and interconnection between cards, there is a full range of connector carriers available. Designed for the mounting of DIN 41612 style connectors, the carriers are installed between the chassis side plates in either the 160mm or 220mm position. Supplied singly.

### CHASSIS PLATES

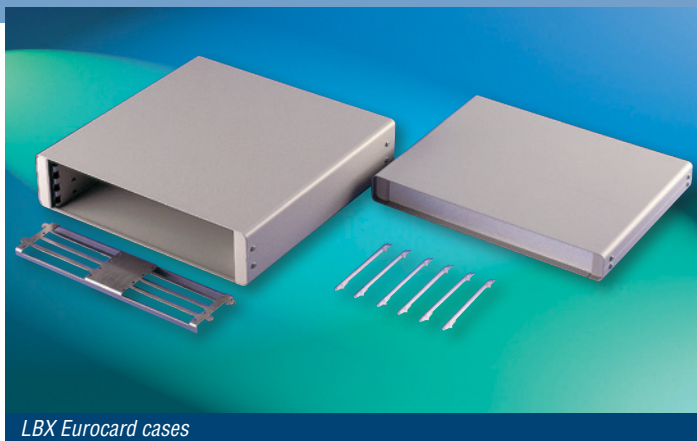
Zintec steel chassis plates are available for the direct mounting of power supplies, PCBs and components. Once attached to the chassis side plates, a secure sub-assembly is provided. This facilitates system assembly and testing prior to fitting the top and base panels and thus reduces the risk of paint damage. Supplied single with four fixing screws.

### CARD GUIDES

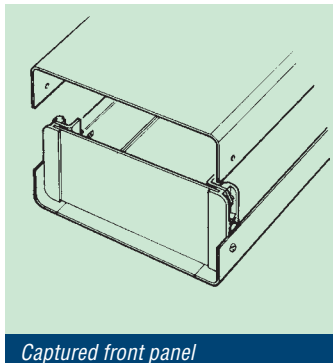
Clip-in card guides are available for mounting Eurocard style PCBs directly to the chassis side plates. Two guides are required for each 160mm board and four guides for each 220mm board. Supplied in packs of 20.



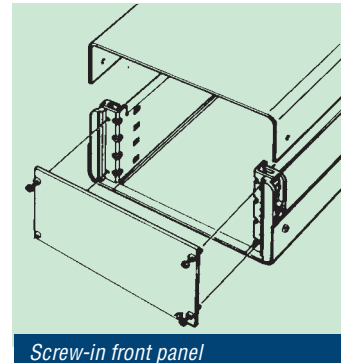
LBX front panel / Eurocard



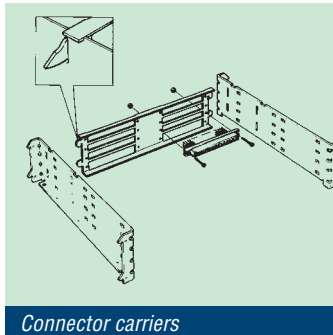
LBX Eurocard cases



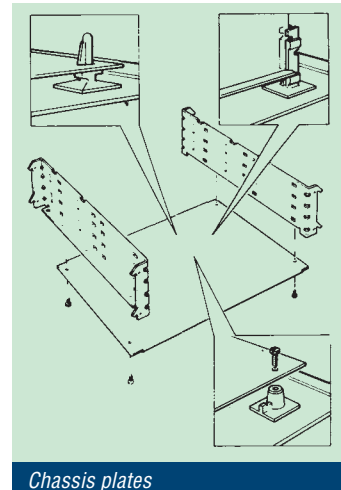
Captured front panel



Screw-in front panel



Connector carriers



Chassis plates

## ORDERING INFORMATION

Case Height	Case Width	Card Depth	LBX Case Ordercode	Front Panel Kit	Connector Carrier	Chassis Plate	Card Guides (Pack of 20)
4HP	3U	160	114-52004	114-52097	114-52092	114-52020	114-52172
4HP	3U	220	114-52006	114-52097	114-52092	114-52021	114-52172
4HP	6U	160	114-52005	114-52085	Not Available	114-52022	114-52172
4HP	6U	220	114-52007	114-52085	Not Available	114-52023	114-52172
6HP	3U	160	114-52008	114-52098	114-52090	114-52020	114-52172
6HP	3U	220	114-52010	114-52098	114-52090	114-52021	114-52172
6HP	6U	160	114-52009	114-52102	Not Available	114-52022	114-52172
6HP	6U	220	114-52011	114-52102	Not Available	114-52023	114-52172
12HP	3U	160	114-52012	114-52099	114-52091	114-52020	114-52172
12HP	3U	220	114-52014	114-52099	114-52091	114-52021	114-52172
12HP	6U	160	114-52013	114-52103	114-52095	114-52022	114-52172
12HP	6U	220	114-52015	114-52103	114-52095	114-52023	114-52172
24HP	3U	160	114-52016	114-52100	114-52091 (x2)	114-52020	114-52172
24HP	3U	220	114-52018	114-52100	114-52091 (x2)	114-52021	114-52172
24HP	6U	160	114-52017	114-52104	114-52095 (x2)	114-52022	114-52172
24HP	6U	220	114-52019	114-52104	114-52095 (x2)	114-52023	114-52172