

## NATO BOA Products

Metrodata products include Switches, Multiplexors, Fibre Optic Modems (FOM), DSUs, Interface Converters, Protocol Converters, Rate Converters and specialist interface converters for:

- Satcom Modems
- Crypto Equipment
- Radio Relay Systems
- Routers
- ATM Switches
- Leased Lines
- Fibre Optic Links

Where applicable Chassis and Rackmounting is available for these products. Metrodata provide products supporting Military Communications features such as precise clocking/timing, odd bitrates and fast serial interfaces. With clients such as NATO, US DoD, NASA and most major Prime Contractors we are used to remove interfacing and interoperability headaches. All our products are COTS, but many of them were developed originally for Satcom and Crypto interfacing. With our flagship AP Platform we can support EIA530 Circuit Emulation to 20Mbps in 1bps increments for precise timing, and also support asymmetric clocking. Also we support ATM cells over serial interfaces including EIA530 to 20Mbps, as well as ECL interfacing for X-Band. Any associated technical data sheets, application notes or manuals are available from the designated Metrodata POC as shown in Part 1 paragraph 10.5 or can be downloaded from [nato.metrodata-defense.com](http://nato.metrodata-defense.com) or [www.metrodata.co.uk](http://www.metrodata.co.uk)

Prices for the selection of products are supplied under separate Price Annex and are to be treated as &ldquo;commercial-in-confidence&rdquo;. For spares, cables and additional product enquiries please contact the Metrodata POC as shown in Part 1 paragraph 10.5 Metrodata products support the following physical interfaces: BNC &ndash; E1, E2, E3, DS-3 and STM-1 / OC-3 Serial &ndash; RS232, EIA530, X.21, RS449, V.35, HSSI, ECL, ASI and LVDS / EIA644 Fiber &ndash; Multi Mode, Single Mode Short Haul and Single Mode Long Haul Ethernet &ndash; 10BaseT, 10/100BaseT, 100BaseTINTERFACE CONVERTERS For interfacing Leased Line, Radio, Router, Satellite and Crypto Baseband Interfaces DC1000 &ndash; E1 2.048Mbps to X.21 Converter DC1200 &ndash; E1 2.048Mbps to V.35 Converter DC3000 &ndash; E1 Framed Nx64kbps to X.21 Converter DC3200 &ndash; E1 Framed Nx64kbps to V.35 Converter DC2000 &ndash; E1 2.048Mbps to EIA530 or X.21 or V.35 Converter FM4000 &ndash; E1 2.048Mbps or Nx64kbps to X.21 or V.35 Converter (Managed) FM4800 &ndash; E2 8.448Mbps to X.21/V.11 Converter FM4850 &ndash; E2 8.448Mbps to HSSI Converter FM4900 &ndash; E3 34.368Mbps to HSSI Converter FM4950 &ndash; DS-3 44.736Mbps to HSSI Converter BC1100 &ndash; Red Side LVDS to HSSI Converter (Crypto to Cisco Router) BC1000 &ndash; Black Side LVDS to HSSI Converter (Crypto to HSSI Radio or Satellite Modem) ETHERNET TO SERIAL CONVERTERS For transporting Ethernet over Serial Equipment including Leased Lines, Radio, Satellite Modems and Crypto. Use IP over Legacy serial equipment. Utilise new bandwidth efficient serial modems and new Crypto Modernized Link Encryption Devices. WC X.21 &ndash; Ethernet Over EIA530 or X.21 (Up to 20Mbps) WC V.35 &ndash; Ethernet Over V.35 (Up to 20Mbps. With Auto Crypto Resync) LV2000 &ndash; Ethernet Over LVDS / EIA644 (Up to 52Mbps) LH1000 &ndash; Ethernet over V.35/EIA530/RS449 to 20Mbps & HSSI to 110Mbps ETHERNET TO WAN CONVERTERS For transporting Ethernet over ITU-T specified Leased Line and Microwave Radio equipment. WC1000 &ndash; Ethernet over E1 WC3445 &ndash; Ethernet over E3 or DS-3 WC155 &ndash; Ethernet over STM-1 or OC-3 Multiple Ethernet and E1/T1 Over Fibre / SDH / SONET For transporting up to 8 x E1/T1 plus 8 x Ethernet over a Fibre Link. Supports GFP Mapping of services over SONET or SDH Networks. Metrolan1000 - 8 x E1/T1 plus 8 x Ethernet over STM-1 / OC-3 or Fiber. Metrolan2000 &ndash; Above plus 3 x E3 or 3 x DS-3 FIBRE OPTIC MODEMS With a range of established Fibre Optic Converters and the new FiMo range for Satcom and Crypto over Fibre Metrodata support most military FOM requirements with COTS equipment. FC1000 &ndash; E1 to Multi Mode Fibre Converter FC1100 &ndash; E1 to Single Mode Short Haul Fibre Converter FC1200 &ndash; E1 to Single Mode Long Haul Fibre Converter FC3000 &ndash; E3 / DS-3 to Multi Mode Fibre Converter FC3100 &ndash; E3 / DS-3 to Single Mode Short Haul Fibre Converter FC3200 &ndash; E3 / DS-3 to Single Mode Long Haul Fibre Converter FC4000 &ndash; STM-1 / OC-3 BNC to Multi Mode Fibre Converter FC4100 &ndash; STM-1 / OC-3 BNC to Single Mode Short Haul Fibre Converter FC4200 &ndash; STM-1 / OC-3 BNC to Single Mode Long Haul Fibre Converter FIMO-232 &ndash; RS232 to Fibre Converter. Up to 256kbps. FIMO-2000 &ndash; Multi Serial to Fibre Converter. Up to 2Mbps. Ring POC For Higher Speed FIMO-4000M &ndash; Managed Multi Serial to Fibre Converter. Up to 20Mbps. Exact Clocking, Complex Clocking Topology Supported, Asymmetric, Satellite and Crypto Backhaul. E1 Drop/Insert Multiplexer For transporting Nx64kbps Data and E1 Voice over E1 Interfaces. For multiplexing X.21 or V.35 over E1. FM4200 &ndash; E1 BNC to E1 BNC/RJ45 and X.21/V.35 Drop/Insert Multiplexer FM4500 &ndash; E1 BNC to E1 BNC/RJ45 and Quad X.21/V.35 Drop/Insert Multiplexer AP Access Concentrator Platform A modular ATM Switch based platform specifically designed for interfacing Satcom, Radio and Crypto into standard terrestrial networks, leased lines and WAN infrastructure. With the worlds most flexible ATM Switch serial interfaces we support 20Mbps on EIA530 110Mbps on HSSI and 1bps increments as well as Asymmetric bitrates. Also Auto Crypto Resync is available on our ATM Cell Bearing EIA530 Module. AP3000 &ndash; 3 Slot Chassis AP4000 &ndash; 4 Slot Chassis AP8000 &ndash; 8 Slot Chassis ATM Modules E1, E2, E3, DS-3 and STM-1 / OC-3 Serial Cell Bearing &ndash; EIA530, HSSI and ASI NON ATM / Circuit Emulation Modules T1, E1, E2, E3, DS-3 Flexi Serial &ndash; EIA530, HSSI and ECL Flexi LAN (100Mbps Wire Speed) ATM RATE CONVERTERS The Metrodata ATM Switching DSU Range supports E1, E2, E3, DS-3 and STM-1/OC-3 interfaces, and conversion between any of these. We have provided a small selection of the product range below. Please contact the Metrodata POC for more options or visit [nato.metrodata-defense.com](http://nato.metrodata-defense.com) E3 to E1 ATM Converter E3 to E2 ATM Converter STM-1 / OC-3 to E1 Converter

