

CLOUDTRONICS

Asia Pacific Network Solutions
Cloud Electronics - Fibre Optic Technologies -
Telecommunications - LAN - WAN



Cloudtronic is proudly an Australian
owned and operated company.



Our Mission

The Cloudtronics mission, is to become a predominant market leader in our chosen field of specialised cloud electronics, with supporting cloud services.

To solve client problems by providing tailored solutions and utilising our unique products, services and expertise.

Our Vision

The Company's vision is to pioneer electronic cloud services and provide clients with a real alternative to the current industry norms.

To extend our expertise beyond physical locations with our cloud systems, whilst providing unique interactive support and solutions.

Develop and distribute advanced products and services, with support services using the Internet to cater for our clients demands.



Network Solutions

Cloudtronics specialises in providing unique solutions which are tailored to our client's requirements with built-in cloud support.

We assist in the complete solution cycle, from inception, design, POC, manufacturing, setup and handover.

We eliminate risks by controlling the entire development and deployment cycle of our products and services.

- ▶ With an international portfolio serving both local and overseas clients and a reputation that is second to none, Cloudtronics provides solutions for:
 - ▶ Cloud Electronics devices and systems
 - ▶ Optical fibre transmission
 - ▶ Consultancy on communication systems
 - ▶ Multiplexing and transmission equipment
 - ▶ IPTV transmission and solutions
 - ▶ Equipment training and support





Company History



Melbourne Office

- ▶ Cloudtronics was established in 2014 with founding members have a combined 60 years experience in Telecommunications, Electronics, Optical Fibre, Cloud Services.
- ▶ Manufacturing in Australia, Taiwan, Indonesia.
- ▶ In 2015, Cloudtronics Established our first offshore representation in Jakarta.
- ▶ 2016 Cloudtronics established USA R&D Lab
- ▶ 2017 Cloudtronics Opened the 2nd Sales and Support office in Victoria, Australia
- ▶ 2019 Cloudtronics relocates the Head Office and R&D to new building
- ▶ 2020 Cloudtronics relocated the Sales and Support office in Victoria, Australia to a larger facility.
- ▶ 2020 Cloudtronics Indonesia formally becomes P.T Cloudtronics Indonesia Jaya
- ▶ 2021 P.T Cloudtronics Indonesia Jaya relocates to a larger facility.

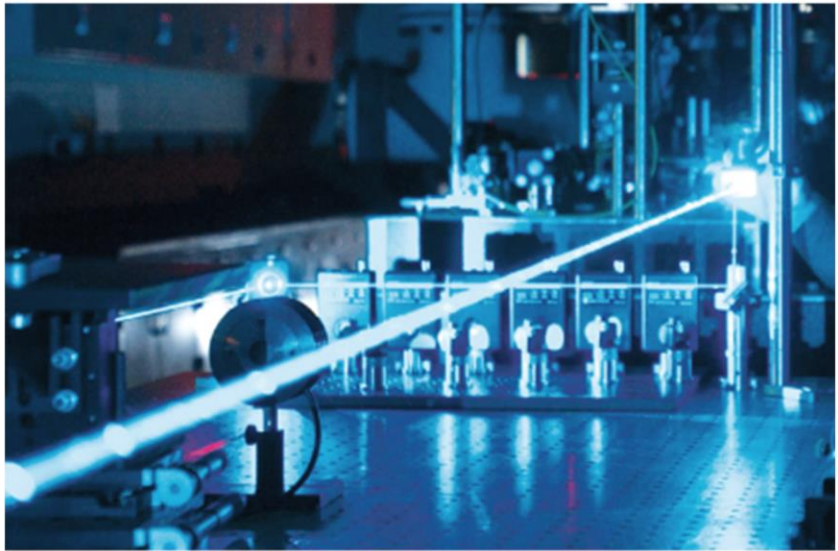


Project Design and Development

- ▶ Project solutions developed in our lab can be showcased for clients to:
 - ▶ Demonstrate the technologies and methodologies employed.
 - ▶ Ensure the solution is available and operational.
 - ▶ Ensure technological foundation is modelled for future scaling.
 - ▶ Provide peace of mind with “Proof Of Concept” for solutions.
 - ▶ Cloudtronics labs are an investment in our client’s achievement of success, using proven technologies and proven deployment.



World-Class Expertise



- ▶ Cloudtronics Research and Development team employs:
 - ▶ Electronic Engineers
 - ▶ Software Engineers
 - ▶ Specialised Engineers and Internationally certified optical fibre engineers
 - ▶ Qualified enterprise switching and routing engineers
- ▶ The team works in collaboration to provide our clients with customised transmissions solutions that are not typically available commercially.
- ▶ We pride ourselves on bringing cutting edge solutions to clients that may not have had success anywhere else.



Technical Sales and Support

*We partner with our clients
and work for their success.*

- ▶ We have an enthusiastic and focused sales team in place to provide pre-sales and technical assistance, to guide and recommend the appropriate equipment solutions and to deliver effective after-sales support.
- ▶ We understand the challenges of everyday field work and the competing demands of cost and time.
- ▶ Our sales team can customise product sets based upon your specific requirements, both technical and budget.

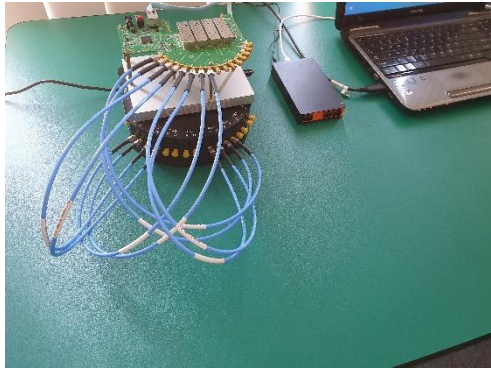


Research and Development Capabilities

- ▶ Cloudtronics operates product and project development facilities in Australia, Pacific Islands, Indonesia, Canada and the USA.
- ▶ The primary directive for our laboratories is to:
 - ▶ Develop cloud electronics for various industry segments
 - ▶ Develop networking and communication solutions for clients.
 - ▶ Innovate on existing technology implementations.
 - ▶ Model and test equipment for real-world reliability.
 - ▶ Support any “Proof Of Concept” efforts.

Sydney R&D Facilities

100M to 100G BERT



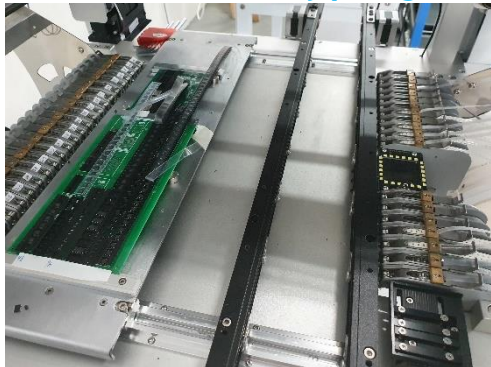
1G ~ 100G RFC2544



Firmware Engineering



PCB Prototyping



PCB Oven



Hardware Testing



Melbourne Distribution Facilities

Facility



QA



Warehouse Stock



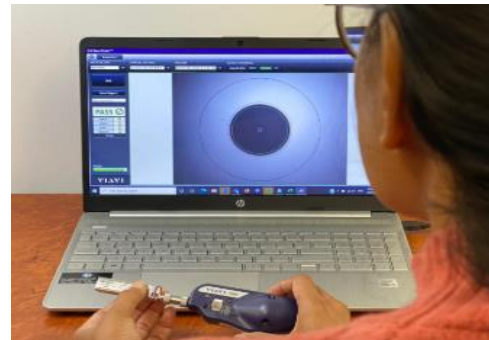
10~100G BERT Testing



Client Specific Labelling



Testing & Inspection



Taiwan Facilities

Laser Welding



Soldering Stations



Optical Alignment



Aging



QA



Warehouse





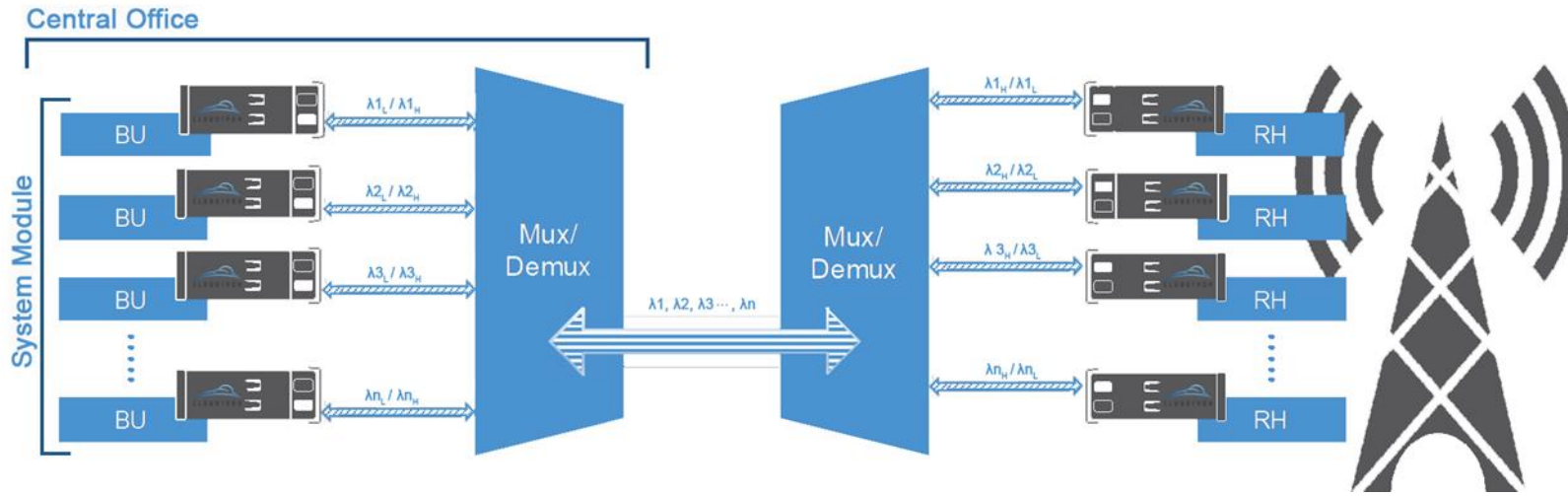
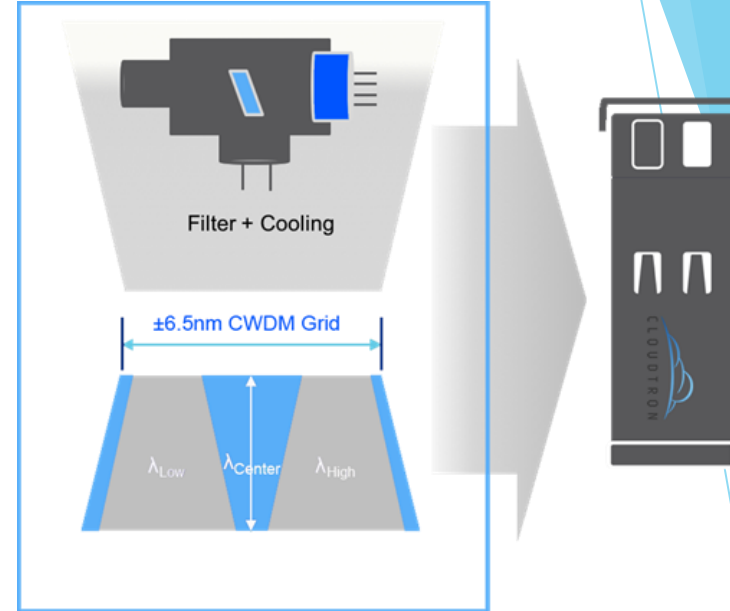
Product Lines Examples



Case Study CWDM-Plus

CWDM-Plus is our *Bi-Directional CWDM Solution*.

The transceivers use a filter and Thermo Electric Cooling (TEC) technology to divide single 20nm CWDM channel into two sub-channels, thus allowing more accurate controlling.






A single fibre bi-directional WDM transceiver that lowers your CAPEX and OPEX.



Case Study CWDM-Plus

Continued

-  Operates over industrial temperature.
-  Uplink/Downlink wavelengths separated ± 9 nm max.
-  Reach up to 40 km.

Short Description	Reach	Band	Temp
Gigabit Ethernet, CPRI 2-5	20km	1271 - 1611 nm	-40/85 °C
OBSAI PR3-01, BiDi	20km	1271 - 1611 nm	-40/85 °C
CPRI 3, BiDi	20km	1271 - 1611 nm	-40/85 °C
Gigabit Ethernet, BiDi	40km	1271 - 1611 nm	-40/85 °C
SONET OC-3, BiDi	120km	1506/1514 nm	-40/85 °C
Gigabit Ethernet and SONET OC-3, BiDi	40km	1506/1514 nm	-40/85 °C
Gigabit Ethernet and SONET OC-3, BiDi	40km	1271 - 1611 nm	-40/85 °C



Parameters	Specification
Optical Modulation Amplitude	Min. -2 dBm
Optical Extinction Ratio	Min. 9 dB
Wavelength	1271 - 1611 nm
Maximum Output Power	Max. -2 dBm
RX sensitivity	Max. -22 dBm
Power Consumption	Max. 1.2 W



Cloudtron™ Transceivers

The Cloudtron™ Transceivers is a brand owned by Cloudtronics® and range from 100Meg to 400G

Cloudtron™ have 2 product series. C-Series for Commercial Applications and T-Series for Telco Applications

Cloudtronics provide a 1 to 1 warranty replacement for products within the warranty period.

Cloudtron™ Transceivers can be custom coded to suit many different brands of equipment like Cisco, Juniper, Arista, Lenovo etc.





MaxiMate (SFP/XFP/QSFP)

The MaxiMate is designed to be a Universal SFP/XFP/QSFP remote programming and testing device for Transceivers and Fibre Optic Networks.

The Device is Cloud driven with live Chat support and has many options to cover Telco Applications.

This device is designed for NOC operations or Regional Site locations.

Device will fully Web Based no applications to load no plugins to load (Non-Java Based)





RackMate (SFP/XFP/QSFP)

The Cloudtronics RackMate offers a unique solution in providing a hardware device and a service to test, save, code and re-code specific SFPs and assist in fibre optic related problems.

Generally, problems are typically layer 1 related and Cloudtronics can provide remote assistance via the optional, live digital Inspection probe, built in optional micro OTDR and video streaming.

Other SFP code related problems can be detected and resolved, with the connection of our RackMate to the clients switch with our built-in web based serial port.

Users simply connect to the web interface of the RackMate via browsers or smart devices such as iPhones / iPads or Android Tablets and request live assistance (8 x 5 / 24 x 7) depending on the subscription cover.





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Cloudtronics provide a 1 to 1 warranty replacement for products within the agreed warranty period.

Cloudtron™ Transceivers can be custom coded to suit many different brands of equipment, like Cisco, Juniper, Arista, Lenovo etc.

Engineered to achieve carrier-class uptime and performance

- Built on FR-4 grade PCB
- Quality Japanese laser for trouble free operation up to +4dB
- Receiver sensitivity down to >-41dBm, customisable to performance requirements
- Clock and Data Recovery (CDR) enabled SFP+ modules on Tx and/or Rx path
- Customised EPROM/MCU for DDM and Non-DDM Operation
- Most have a 5-year local Australian warranty



ARISTA

BROCADE

ciena.

CISCO

Coriant

EMULEX

FINISAR

hp

JUNIPER
NETWORKS

MikroTik

MRV
Communications, Inc.

Nokia Siemens
Networks



Cloudtron™ Transceivers vs Generic Transceivers

Cloudtron™ By Cloudtronics Transceivers	Generic Transceivers
Up to 5 Year warranty with (if required) prompt 1 to 1 Replacement	Standard 12 month Warranty with lengthy turn around time for replacements
CloudMate MaxiMate Remote Support with Live Chat, Email, Phone	Email, Phone
Custom Coding Available	OEM Coding Only
Australian & Indonesian Support, backed by R&D Labs in USA, Australia	China Based Support
Japanese / Korean / American Laser Transmitters and Receivers	Transmitter Origins Unknown
Australian & Jakarta Based Sales and Technical teams	Normally China Based

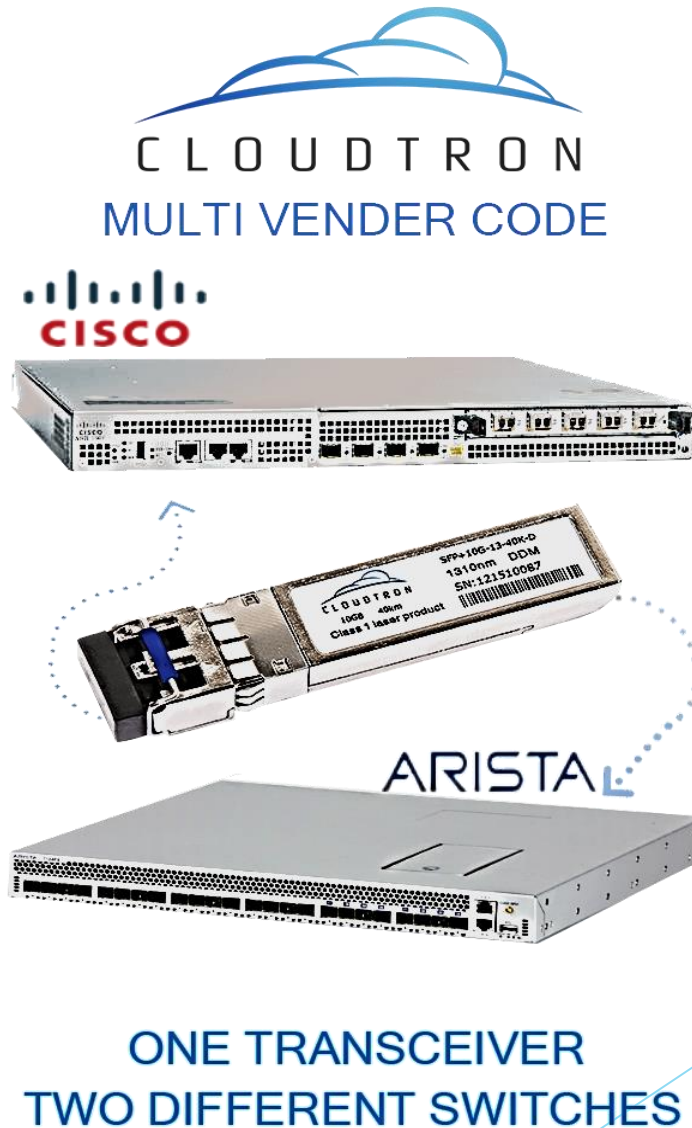


Cloudtron™ Transceivers

The Cloudtron™ Transceivers may also be Multi-Vendor coded in some cases.

Cloudtronics can combine transceiver codes, so that one transceiver will work in different host devices.

The diagram shown illustrates an actual multi-vendor coded module, whereby a single transceiver has been programmed to work in both Cisco and Arista switches.



ONE TRANSCEIVER
TWO DIFFERENT SWITCHES

CLOUDTRON

SFP Eco-System



11. In Premises SFP Remote Programming (Cloudmate)

Questions? X
Click here to chat with us

Online - Chat With Us

12. CloudMate built-in live cloud support

1.5 year warranty

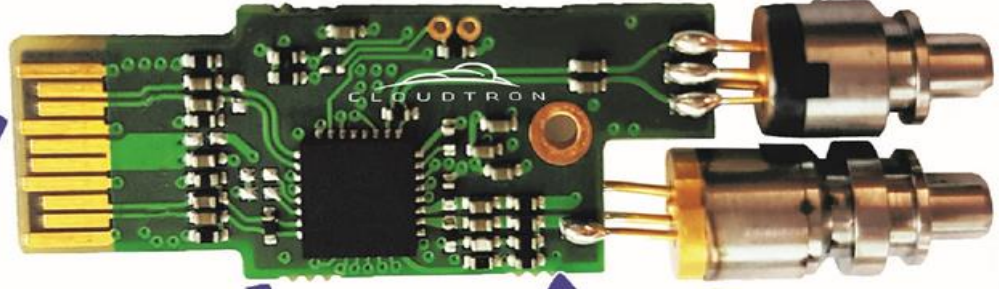
2. Live recoding service with Cloudmate or send in for 24 hour turnaround

10. Descriptive part No for ease of ordering



9. Barcode serial No. tracking

3. Locally customised for Cisco, Juniper, HP, etc



8. High quality receiver down to -37dB

7. Quality Japanese laser for trouble free operation up to +4.5dB

4. Customised EEPROM or MCU for DDM and Non-DDM operation

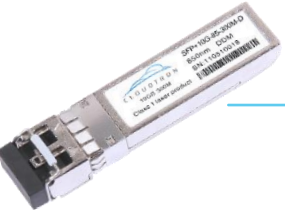
5. High quality FR4 PCB

6. Laser welded and tuned spigot for accurate connection



Cloudtron™ Eco-System

Cloudtronics HQ

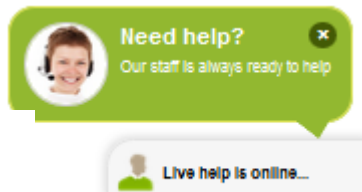


Cloudtron™
Transceivers

MaxiMate

WWW

Technician can
Access Web
Application on
the MaxiMate



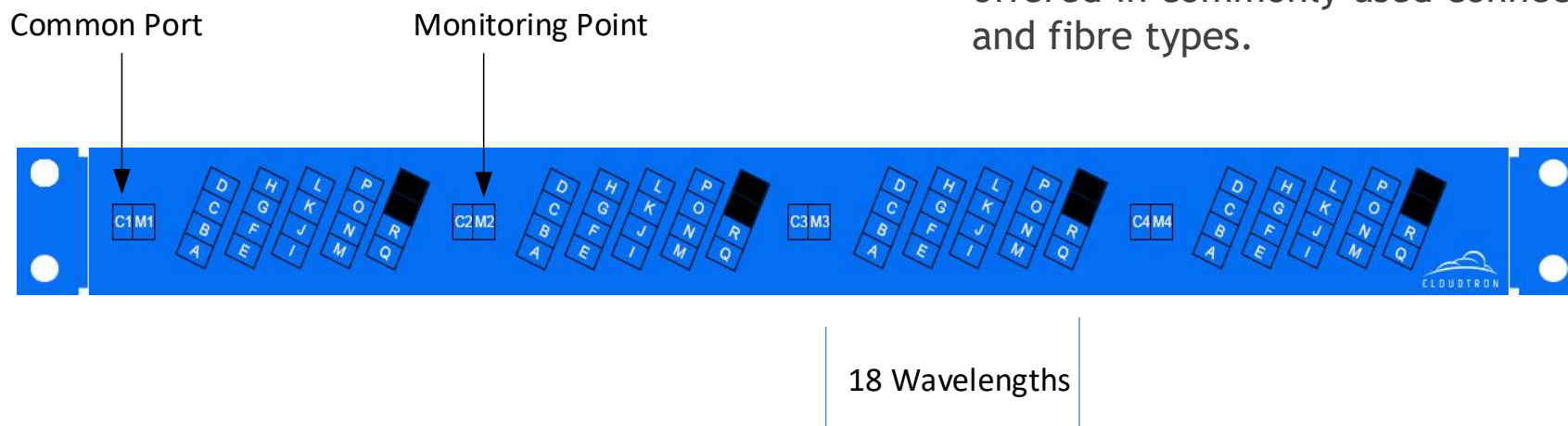
Live Chat with Cloudtronics HQ



Made-to-Order CWDM filters

Our Cloudtron CWDM filters are made-to-order based on each individual project requirements.

- ▶ Our Cloudtron CWDM filters are made-to-order based on client project requirements.
- ▶ Together with the project team, we can supply fully-fledged solutions for CWDM networks including customised add/drop modules.
 - ▶ They can be ordered with or without being assembled in a rackmount enclosure.
 - ▶ The Cloudtron patchleads and pigtails are offered in commonly used connector types and fibre types.



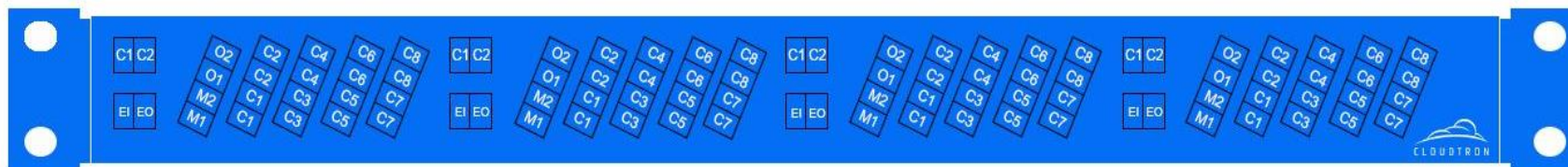
Cloudtron Single 18-CWDM Wavelength 1 RU Enclosure



Made-to-Order DWDM filters

Our Cloudtron DWDM filters are made-to-order based on each individual project requirements.

- ▶ Our Cloudtron DWDM filters are made-to-order based on client project requirements.
- ▶ Together with the project team, we can supply fully-fledged solutions for DWDM networks including customised add/drop modules.
 - ▶ They can be ordered with or without being assembled in a rackmount enclosure.
 - ▶ The Cloudtron patchleads and pigtails are offered in commonly used connector types and fibre types.



Cloudtron QUAD 18 Wavelength DWDM 1 RU Enclosure



Our product ranges, also include the following:

Communication & Networking

- CloudMate (SFP / XFP / QSFP) programming and testing device
- Transceivers SFP ~ QSFP28 (100M-100G)
- DWDM - Muxes/Demuxes
- CWDM - Muxes/Demuxes
- Active / Passive Direct Attached Cable Assemblies
- Media Converters / OEO
- Customised Optical Engineering Services

Media Transport

- IPTV Services / Digital Signage
- Broadcast Media Servers
- AES / SSL Set Top Boxes
- Broadcast Transcoding Services
- CCTV Consolidation / Monitoring
- High Efficiency Video Coding (HEVC), or H.265 Codec

Cloud Electronics

- Customised Electronics
- Customised Cloud Services (Monitoring / Reporting)
- Site to Multi-Site VPN

Training Services

Optical Network Consulting

There are *no silly questions*, so if you have any queries at all, please just ask.

sales@cloudtronics.com.au

Thank-you