Data loggers for remote data collection & long term monitoring

- **Features**
  Ethernet, USB-Host, USB-Device, RS-232, Satellite, Cellular, Industrial Communication

- **Product Highlights**
  High data availability due to large memory and redundant communication, Multitasking capability for short polling cycles, Communication via TCP/IP, Integrated Web Server, Ultra low power consumption, Design for harsh environments, Industrial communication

- **IP-Communication**
  Yes

- **Sensor interfaces**
  SDI-12, RS-485 (SDI-12), Modbus RTU, analogue-in (voltage and current), Impulse Input, Status Input

The versatile OTT netDL 500 and 1000 data loggers were developed specifically for use in hydrology and meteorology stations. In addition to recording data, the data loggers are extremely low power and offer flexible data transfer options via the internet and mobile networks, providing a logging and telemetry solution for every project.

OTT netDL 500/1000	IP data logger for hydrological and meteorological applications

Communications interfaces	
Ethernet RJ-45 10 Base-T (netDL 1000)	

USB Host and USB Device	
RS-232	
netDL 1000	2
netDL 500	1

Sensor interfaces (standard version)	
SDI-12 V 1.3	
RS-485 (SDI-12/Modbus RTU)	
Pulse/status input	
netDL 1000	4
netDL 500	2
Status/switch output	2

Input/output modules	
Analogue inputs	configurable
Analogue inputs, isolated	configurable
Analogue outputs	configurable
Serial input module for OTT Sensors	
Barometric input board	

Measuring channels	
Standard	40
Optionally	120

IP communication	
Integrated TCP/IP stack	HTTP, HTTPS, FTP, SMTP, Socket...
Communication paths	GSM/GPRS/3G, Ethernet/DSL, PPP over landline
Integrated Web server	
Encrypted data transmission HTTPS	SSL 3.0 / TLS 1.0 /1.1/1.2
Integrated modem (optional)	
GSM/GPRS	900/1800, 850/1900 MHz
GSM/GPRS; 3G (UMTS/HSPA+)	900/1800, 850/1900 MHz; 800/850, 900, AWS 1700, 1900, 2100 MHz

Operating system	RTOS with power management for minimal power consumption
Time synchronisation	SNTP (Simple Network Time Protocol)

Electrical data	
Power supply	9 ... 28 V DC (typ. 12 V DC)
Power consumption at 12 V DC	
Sleep mode	< 250 µA; Sleep mode, impulse active < 10 mA
Active mode	approx. 25 mA ... max. 400 mA (depending on configuration)
RAM / NOR / NAND Flash	4 MB / 8 MB / 256 MB

Data memory	
Capacity	up to 1,100,000 values
OTT Parsivel spectral data	yes

Display	
Graphical dot matrix	122 x 32 pixels
Illumination	LED backlight
Control	by jog shuttle
Status display	2 x LED (variant with integrated modem)

Environmental conditions

Temperature range	
Operation	–40 °C ... +70 °C
Storage	–50 °C ... + 85 °C
Internal modem	–30 °C ... +70 °C
Display (display on)	–20 °C ... +70 °C
Relative humidity	5 ... 95 % (non condensing)

Mechanical data	
Dimensions (L x W x H)	
netDL 1000	232 mm x 124 mm x 86 mm
netDL 500	148 mm x 124 mm x 86 mm
Housing	ABS

Protection class	IP41