

PDL Mk.II GARDT®

ARINC 615/615A Portable Data Loader



- ARINC 615 and ARINC 615A data loading via standard aircraft Data Loading Connector
- TechSAT GARDT® Technology for secure data loading according to Airbus Security Requirements for Portable Data Loader
- Full-ruggedized 10.1" Panasonic Convertible Toughbook CF-20 in a polyethylene protector case
- Windows® 10 Professional
- Direct data loading from USB 3.5" floppy disk, USB DVD drive, USB stick, or HDD media repository
- Import of load parts from all types of USB media or via LAN to HDD media repository
- TechSAT GARDT® unit providing 4 Tx and 8 Rx ARINC 429, 4 function discretes, and 1 Ethernet interface for A615A data loading
- Three external power operation modes: 230 VAC / 50 Hz, 110 VAC / 60 Hz, and 115 VAC / 400 Hz
- ARINC 615 load cable included, specific adapter cables available (e.g. A603, RJ45, FADEC, MDDU)
- Fully compliant with standard PDL adapter cables
- Interface to FLS Management Systems, e.g. eESM Lufthansa Technik





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Application Scope

TechSAT's portable data loader **PDL Mk.II GARDT®** is an integrated software and hardware solution for loading aircraft software parts, such as databases and operational programs, into airborne computers according to the ARINC 615, ARINC 603, ARINC 615A, ARINC 645-1, and ARINC 835 standards.

Features

The PDL Mk.II GARDT® is protected by a watertight, crushproof, and dust-proof housing, which ensures safe operation even in harsh flightline environments.

The loader is built from commercial-off-the-shelf parts and components. The assembly's system design and the assembly itself are targeted at fulfilling ground support equipment (GSE) requirements.

The core system consists of a ruggedized notebook PC. TechSAT's GARDT® Unit, which is compliant to the Airbus Security Requirements for Portable Data Loader, supplies the ARINC 429 resources.

TechSAT's PDL GARDT® Frontend application for Windows® serves as data loader utility.

The load parts can be imported to the internal media repository through various media types, either via the USB port of the PDL or by connecting the PDL to an internal LAN.

The backside of the protector case provides cable storage for the standard data loading connector cable used to connect to A615 and A615A LRUs.

An interface to any FLS Management tool can be provided on request.

eEnabled Software Management

"eESM" - the innovation project of Lufthansa Technik

Based on decades of experience in aircraft maintenance, LHT developed a beneficial administration software tool which supports the entire data handling process of LRU software updates.

The complete set is distributed under the brand name eEnabled Software Management (eESM) including TechSAT's Portable Data Loaders as the core product for data loading tasks.

PDL Sync Solution

The PDL Sync is TechSAT's lightweight solution for Electronic Distribution of Loadable Software Aircraft Parts (eliminating the need for physical media), it provides the following features:

- > Central management of software parts for entire fleets
- > Electronic distribution of software parts to PDLs
- > Definition of aircraft configurations at tail sign level
- > Tracking of data loading operations

Technical Data

Notebook Features

- Full-ruggedized Panasonic Convertible Toughbook CF-20
- 256 GB HDD shock-mounted and quick-release
- 10.1" 1920 x 1200 WUXGA touchscreen display
- Removable battery:
 - Battery operation: 8 hrs. with single battery, 16 hrs. with dual battery (acc. Panasonic)
 - Battery charging time: 4.5 hrs. off / 6.5 hrs. on (with 110 V AC/60 Hz, 230 V AC/50 Hz, or 115 V AC/400 Hz external power)
- Housed in rugged polyethylen protector case

GARDT® Unit

- Linux based single board computer
- 4 A429 transmitter channels
- 8 A429 receiver channels
- 4 function discretes
- 1 Ethernet interface
- Compliant to Airbus Security Requirements for Portable Data Loader

Interfaces, Connectors

- Internal connectors (inside protector case):
 - 53-pin ARINC 615 receptacle for connecting the A615-3 load cable
 - 2 USB 2.0 ports and 1 USB 3.0 port for connecting external USB devices
 - 2 RJ45 Ethernet ports (e.g. for LAN access)
- External connectors (outside protector case): 3-conductor C14 power receptacle with ON/OFF switch to connect the PDL to an external 230 VAC/50 Hz, 110 VAC/60 Hz, or 115 VAC/400 Hz power supply

Power Supply

- 230 VAC/50 Hz (via external power inlet)
- 110 VAC/60 Hz (via external power inlet)
- 115 VAC/400 Hz (via external power inlet)

Physical Dimensions

- Size outside: L 411 mm, B 323 mm, H 170 mm
- Weight in total: 7.2 kg (15 lbs.)

Operating Environment

- Temp. operating: -10 °C to 55 °C
- Temp. storage: -20 °C to 60 °C
- Humidity operating: 30% to 80% RH non-condensing

Software Support

- PDL GARDT® Frontend for Windows® 10 Pro 64 bit

Scope of Delivery

- Toughbook CF-20, US or DE keyboard
- PDL GARDT® Frontend CD (PN 202132)
- A615-3 load cable, 250 cm (PN 602513-025)
- Power cable

Extras

- A603 adapter stub cable, 10 cm (PN 602589-001)
- FADEC load cable (PN 1015652)
- MDDU adapter cable (PN 602751-003)
- GARDT RJ45 adapter cable (PN 603028-001)
- External 3.5" USB floppy drive (PN 1016518)
- External 3.5" USB DVD drive (PN 1010081)

Part Number

- 403475/PDL Mk.II-GARDT®