PRODUCT BRIEF

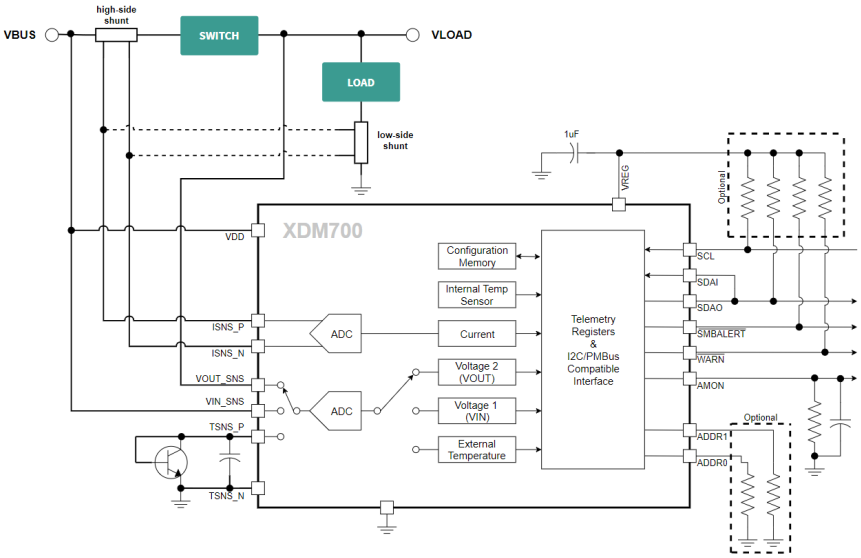
XDM700-1

5 V to 80 V system monitoring IC with PMBus™ 1.3 interface

Infineon's XDP™ XDM700-1 is a high-side or low-side current sensing and system monitoring IC with a wide input voltage range. In addition to current sensing, it also provides continuous monitoring of input voltage, input power, output voltage, on-chip and external temperature. With a 4-level programmable current sense range (12.5 mV / 25 mV / 50 mV / 100 mV) and a dedicated 12-bit Current ADC, it provides an accuracy of <1% for current measurements. The analog current or power can be reported at AMON pin for post-processing. Additionally, the in-built power accumulator ensures reliable energy monitoring and reporting over time. It incorporates several warnings for safety operation and generates various alerts through WARN and SMBALERT outputs. There is a 5 V internal voltage regulator that can be used for low-power peripheral circuitry. It is PMBus™ 1.3 compliant up to 1 MHz and has at least 16 unique programmable device addresses. A detailed list of features is provided in the datasheet.

Potential applications

- Servers and Datacenters
- +/- 48V DC/DC Telecom Infrastructure
- Power Distribution Systems
- Power Supplies, Network Routers and Switches



Key features

- Wide V_{IN} range: 5 V to 80 V
- High-side or low-side current sensing
- 4-level programmable current sense differential range: 12.5 mV / 25 mV / 50 mV / 100 mV
- V/I ADCs: 12-bit resolution
- Analog Monitor (analog current or power reporting) pin
- PMBus™ 1.3 interface: 1 MHz
- High-precision monitoring and reporting: V ≤ 0.4 %, I ≤ 0.75 %,
- P ≤ 1.15 %, E ≤ 2.7 %
- Integrated 5 V regulator (10 mA output capability)
- Reporting telemetry "Peaks" and "Valleys"
- Programmable over-current, input under-voltage, input over-voltage, output under-voltage, output over-voltage, input over-power and over-temperature warnings
- -40°C to +125°C junction temperature
- VQFN-24 pin (4 mm x 4 mm)

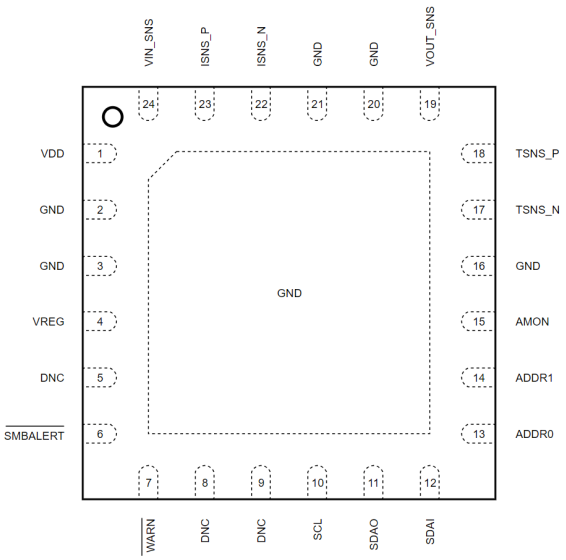
Key benefits

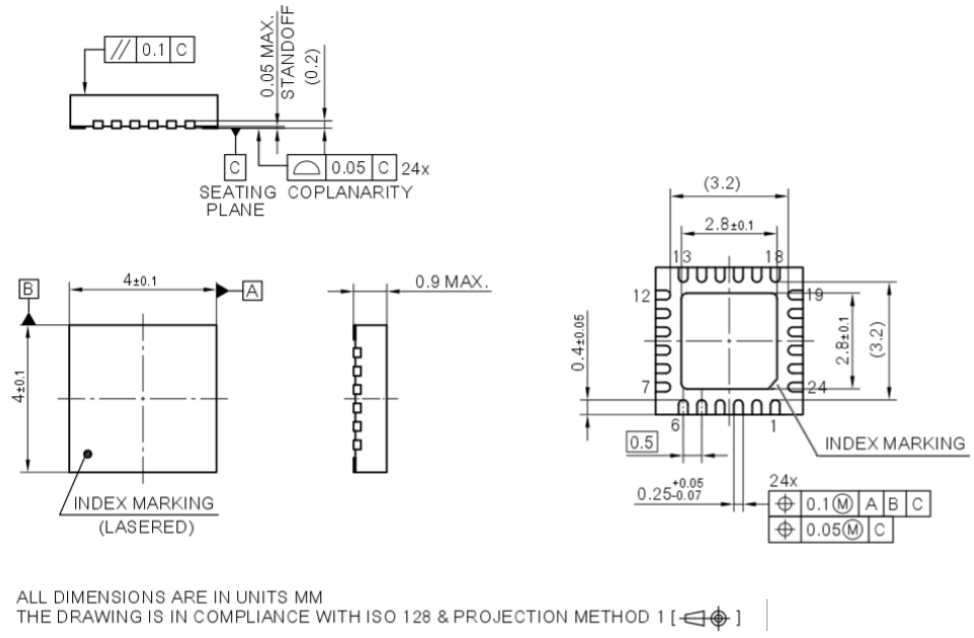
- Optimized system performance
- Improved system reliability
- Usage in a wide range of applications
- Small footprint & fast time-to-market
- Compliance with industry standards using PMBus™ 1.3
- Easy-to-integrate in high-speed systems

Telecom Server Datacom Robotics

PRODUCT BRIEF

Device pinout & package drawing





ALL DIMENSIONS ARE IN UNITS MM
THE DRAWING IS IN COMPLIANCE WITH ISO 128 & PROJECTION METHOD 1 [ ]

Published by
Infineon Technologies AG
Am Campeon 1-15, 85579 Neubiberg
Germany

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Public

Version: V1.0_EN
Date: 11/2025

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