



## Cryotherapy

# NEXCOM's NDiS B116 Embedded Computer Simplifies Cryo Chamber Setup



### Introduction

Cryotherapy covers a wide range of therapies that use super cold temperatures for medical or health purposes. The global cryotherapy market was valued at USD 3.8 billion in 2020, with an expected CAGR of 10.3% from 2021 to 2028. Roughly one-quarter of that figure is from health and wellness applications such as chamber therapy, a non-intrusive treatment method for pain management, relaxation, or beauty treatment such as weight loss, body sculpting, and wrinkle reduction.

### Overview

Our client, based in Poland, makes a range of cryo chambers ranging from localized cryotherapy units to walk-in chambers. Chambers require a computer to control the cooling system, connect to the internet, and provide the HMI for the operator. Originally, due to price considerations, they had settled on using a mainboard and its peripherals integrated into the system. With the complexity of integrating multiple parts they were looking for an all-in-one alternative that could support their Android application and provide all the expansion and connectivity they need.

### Simple Integration with All-In-One Design

The NDiS B116 embedded computer is a complete system in a slim computer package. The primary downside with the original approach was the complexity of the wires and other parts, including the motherboard, storage, power supply, and add-on cards, all of which must be installed somewhere separately in the chamber. The NDiS B116 embedded computer provides the entire computer in a neat, low-power, fanless computer system with all the same features and at a comparable price point. This eliminates the wiring and setup headaches and greatly reduces the integration effort.

### Easy Development with ARM and Android

The NDiS B116 uses the low-power high-performance Rockchip RK3399 64-bit processor with dual-core ARM® Cortex®-A72, quad-core Cortex®-A53, and Mali-T864 GPU. The system also includes 2GB of memory and 8GB of eMMC. ARM is well-known for its great pricing and is the architecture used on most of the world's smartphones. It supports the Android operating system, opening the gates to an army of Android developers around the world.

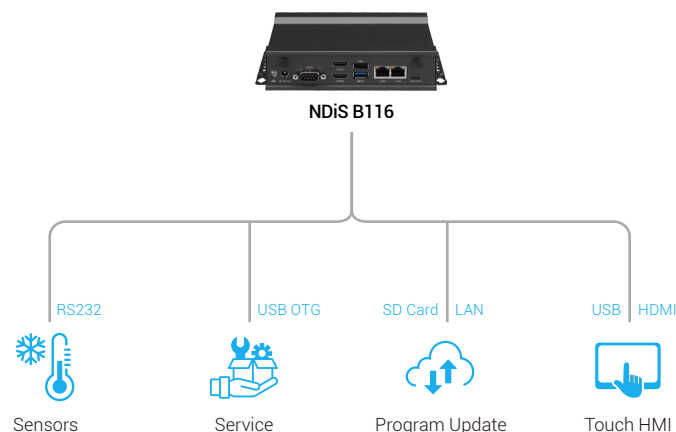
### Multiple Expansion and Connection Options

An all-in-one system provides slightly more limited expansion options than a mainboard plus peripherals, but the NDiS B116 covers all the essentials plus more:

- **HDMI and USB** for the high-resolution display and touch-based HMI
- **4 x RS232** for machine sensors, and in particular, the temperature sensor
- **USB OTG** for installation, maintenance, and upgrade of Android and system apps
- **SD card** for internal storage and performing system updates
- **LAN** for use with web services or for upgrades
- **mini-PCIe** for optional Wi-fi + Bluetooth, 3.5G, and LTE modules

### Conclusion

The NDiS B116 is an ideal choice for integrators that want to retain streamlined integration and eliminate the unsightly tangle of cables that are prone to problems and make maintenance difficult. The all-in-one, low-power design, with Android support and range of essential connectors for integration provide the best balance of cost and performance, making installation and integration quicker and simpler than ever before, without breaking the bank.



## NDiS B116

- Onboard Rockchip RK3399 ARM® Cortex®-A72 and Cortex®-A53
- 2 x 10/100/1000Mbps LAN port
- 2 x HDMI 2.0, 1 x LVDS, 1 x eDP, 1 x MIPI DSI
- 2 x USB 2.0, 1 x USB 3.0, 1 x USB 2.0 OTG
- 1 x RS232/422/485
- 1 x mini-PCIe socket for optional Wi-Fi/3.5G/LTE modules
- Fanless and slim design
- Support Android

